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MW**ClH<sub>2</sub>IS****Hydrogen sulfide – iodine chloride (1/1)**

(weakly bound complex)

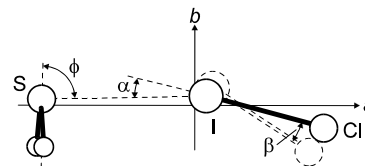
**C<sub>s</sub>**

(effective symmetry class)

(large-amplitude motion)

H<sub>2</sub>S · ICl

$r_0$	Å	$\theta_0$	deg
S...I	3.154(3)	$\phi$ <sup>a)</sup>	91.9(12)
		$\beta_{av}$ <sup>b)</sup>	4(1)
		$\alpha$ <sup>a)</sup>	0(5)



The complex has a geometry in which the S...I–Cl nuclei are collinear, with the ICl subunit almost perpendicular to the plane of the H<sub>2</sub>S nuclei. The intermolecular stretching force constant is 16.6 N m<sup>–1</sup>.

<sup>a)</sup> See figure for the definition.

<sup>b)</sup> Average value of  $\beta$ , which is the instantaneous angle between the ICl axis and its equilibrium direction during the zero-point angular oscillation of ICl. ICl is pivoted at its center of mass; see figure.

Legon, A.C., Waclawik, E.R.: Chem. Phys. Lett. **312** (1999) 385.